

REMARKS

Double Patenting

The Examiner provisionally rejected claim 9 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 15 of copending Application No. 10/676,671.

In response, the Applicant is concurrently filing a Terminal Disclaimer.

Claim Rejections- 35 U.S.C. § 112

The Examiner rejected claims 10 and 11 under 35 U.S.C. § 112, second paragraph, “as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” *May 16, 2006 Office Action*, at page 3. In addition, the Examiner states, “claims 10 and 11 depend from a cancelled claim 1, and therefore, lacks antecedent basis, and is indefinite.” *May 16, 2006 Office Action*, at page 3.

The Applicant has amended claims 10 and 11, such that the claims comply with the requirements of 35 U.S.C. § 112, second paragraph.

Claim Rejections – 35 U.S.C. § 103

The Examiner rejected claims 2, 3, 5-7, and 9-11 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,077,436 (“*Rajnik*”) in view of U.S. Patent 4,781,831 (“*Goldsmith*”). *May 16, 2006 Office Action*, at pages 3-6.

The Applicant has amended independent claim 9, and respectfully traverses the rejection.

Independent claim 9, as amended, is patentable over *Rajnik* and *Goldsmith* because the combined references do not disclose all the elements of amended claim 9.

“To establish *prima facie* case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” M.P.E.P. § 2143.03, *citing, In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *Id.*, *citing, In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970).

The Applicant respectfully contends that neither *Rajnik* nor *Goldsmith* disclose a housing with “a sweep fluid inlet port” and “a sweep fluid and permeate outlet port,” “where the sweep fluid inlet port and the sweep fluid and permeate outlet port are configured such that the sweep fluid flows substantially through the entire length of the permeate chambers without encountering an egress to an external surface of the membrane element.” In addition, the Applicant respectfully contends that neither *Rajnik* nor *Goldsmith* disclose a housing where the permeate channels or channel are proximate the end faces of the monolith.

Goldsmith discloses a cross-flow filtration device that “receives a feed stock at a feed end and the walls of the passageways conduct the filtrate to the filtrate conduits while passing the impermeable materials as retentate from a retentate end.” *Goldsmith*, at col. 5, lines 58-62. *Goldsmith* does not disclose or suggest the use of a sweep flow, nor does *Goldsmith* disclose or suggest a sweep fluid inlet port or a sweep fluid and permeate output port.

Rajnik discloses a filtration device with two sets of passages, “one set of passages is referred to as primary channels, and the other set is referred to as egress conduits,” *Rajnik*, at col. 4, lines 10-12, with a series of holes for manifolding distributed along the surface of the monolith. As shown in Figures 2 and 2A, “all of the primary channels 2, are shown adjacent to the exterior surface of the device, 3, or to the egress conduits 4...The means for manifolding are provided by holes, 5, drilled normal to the surface of the monolith. These holes penetrate into

the interior of the monolith so that all of the egress channels communicate with the exterior. Flow of the filtrate occurs both through the egress conduits via the drilled holes and through the exterior surface of the extruded body.” *Rajnik*, at col. 8, lines 55-65. Holes for manifolding are also shown in Figures 8 and 8a, reference 28; Figure 9, reference 30; and Figure 10, reference 34. Further, while not shown in any of the Figures, *Rajnik* mentions that the “egress conduits can also be equipped with means of providing a second gas or liquid. This second gas or liquid can be a sweep gas or a reactive gas or mixture.” *Rajnik*, at col. 6, lines 39-43.

If, as suggested, the egress conduits of *Rajnik* were equipped with means of providing a second gas as a sweep gas, the sweep gas, along with the filtrate, would flow through the egress conduits, *through the holes for manifolding distributed along the surface of the monolith*, and out of the monolith. Clearly, then, the sweep fluid could exit the monolith at any point along the length of the monolith, through the holes for manifolding, *without* flowing through substantially the entire length of the monolith.

As such, *Rajnik* does *not* disclose a housing with a sweep fluid inlet port and a sweep fluid and permeate outlet port “where the sweep fluid inlet port and the sweep fluid and permeate outlet port are configured *such that the sweep fluid flows substantially through the entire length of the permeate chambers without encountering an egress to an external surface of the membrane element.*”

Further, *Rajnik* does not disclose or suggest that the holes for manifolding are “proximate the end faces” of the monolith. As shown in *Rajnik* Figures 2, 8, 24, 25 and 26a, the holes are distributed along the surface of the monolith and distant from the end faces.

In summary, then, neither *Goldsmith* nor *Rajnik* disclose all the elements of independent claim 9, and as such, claim 9 is clearly patentable over the cited references. Claims 2-3, 5-7, and

10-11 then, must also be patentable, since “[i]f an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious.” M.P.E.P. § 2143.03, *citing, In re Fine*, 837 F.3d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). The Applicant respectfully submits that all pending claims are patentable over the cited references and requests allowance.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned in Westborough, Massachusetts, (508) 898-1501.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Brian M. Dingman', with a stylized flourish at the end.

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